## CLAIMS

1. An anti-inflammatory compound comprising the structure:

$$X_a\text{-}X_b,$$

wherein $X_a$ is a membrane translocation domain comprising from 6 to 15 amino acid residues; and $X_b$ is a NEMO binding sequence.

2. The anti-inflammatory compound of claim 1, further comprising a modifying group.

3. The anti-inflammatory compound of claim 1, wherein $X_b$ consists of the following structure:

$$(Y)_n\text{-}X_1\text{-}X_2\text{-}X_3\text{-}X_4\text{-}X_5\text{-}X_6\text{-}(A)_m$$

wherein

n and m are each, independently, 0 or 1;

A and Y each comprises from 1 to about 3 amino acid residues;

$X_1$ is L, A, I or nor-leucine (Nle);

$X_2$ is D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropy-A);

$X_3$ is W, F Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cycloxexyl-alanine (Cha);

$X_4$ is S, A, E, L, T, nor-leucine (Nle), or homoserine (Hser);

$X_5$ is W, H, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and

$X_6$ is L, A, I, or nor-leucine (Nle).

4. The anti-inflammatory compound of claim 1, wherein n is 1 and Y is the sequence TA.

5. The anti-inflammatory compound of claim 1, wherein m is 1 and A is the sequence QTE.

6. The anti-inflammatory compound of claim 1, wherein $X_b$ is a sequence selected from the group consisting of TALDWSWLQTE; LDWSWLQTE; TALDWSWL; ALDWSWLQTE; LDWSWLQTE; LDWSWL; TALDWSWLQT; TALDWSWLQ; ALDWSWLQT; LDWSWLQ; LDWSWLQT; ADWSWL; LDWSWA; ADWSWA; LDFSWL; LDYSWL; LDWAWL; LDWEWL;

TAADWSWLQTE; ADWSWLQTE; TAADWSWL; AADWSWLQTE; ADWSWLQTE; ADWSWL; TAADWSWLQT; TAADWSWLQ; AADWSWLQT; ADWSWLQ; ADWSWLQT; ALDWSWAQTE; LDWSWAQTE; TALDWSWA; ALDWSWAQTE; LDWSWAQTE; LDWSWA; TALDWSWAQT; TALDWSWAQ; ALDWSWAQT; LDWSWAQ; LDWSWAQT; TAADWSWAQTE; ADWSWAQTE; TAADWSWA; AADWSWAQTE; ADWSWAQTE; ADWSWA; TAADWSWAQT; TAADWSWAQ; AADWSWAQT; ADWSWAQ; ADWSWAQT; TALDFSWLQTE; LDFSWLQTE; TALDFSWL; ALDFSWLQTE; LDFSWLQTE; LDFSWL; TALDFSWLQT; TALDFSWLQ; ALDFSWLQT; LDFSWLQ; LDFSWLQT; TALDYSWLQTE; LDYSWLQTE; TALDYSWL; ALDYSWLQTE; LDYSWLQTE; LDYSWL; TALDYSWLQT; TALDYSWLQ; ALDYSWLQT; LDYSWLQ; LDYSWLQT; TALDWAWLQTE; LDWAWLQTE; TALDWAWL; ALDWAWLQTE; LDWAWLQTE; LDWAWL; TALDWAWLQT; TALDWAWLQ; ALDWAWLQT; LDWAWLQ; LDWAWLQT; TALDWEWLQTE; LDWEWLQTE; TALDWEWL; ALDWEWLQTE; LDWEWLQTE; LDWEWL; TALDWEWLQT; TALDWEWLQ; ALDWEWLQT; LDWEWLQ; and LDWEWLQT.

7. The anti-inflammatory compound of claim 1, wherein $X_a$ consists of 6-12 amino acid residues.

8. The anti-inflammatory compound of claim 1, wherein $X_a$ consists of 6-10 amino acid residues.

9. The anti-inflammatory compound of claim 1, wherein $X_a$ comprises at least five basic amino acid residues.

10. The anti-inflammatory compound of claim 1, wherein $X_a$ comprises at least five amino acid residues independently selected from L-arginine, D-arginine, L-lysine and D-lysine.

11. The anti-inflammatory compound of claim 1, wherein $X_a$ is selected from the group consisting of RRMKWKK; YGRKKRRQRRR; ygrkkrrqrrr; YARKARRQARR; yarkarrqarr; YARAARRAARR; yaraarraarr; rrmkwkk, RRRRRR, RRRRRRR, RRRRRRRR, RRRRRRRRR, RRRRRRRRRR, RRRRRRRRRRR, . rrrrrr, rrrrrrr, rrrrrrrr, rrrrrrrrr, rrrrrrrrrr, and rrrrrrrrrrr.

12. An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of: RRMKWKKTALDWSWLQTE;

rrmkwkkTALDWSWLQTE; YGRKKRRQRRRTALDWSWLQTE;
ygrkkrrqrrrTALDWSWLQTE; rrrrrrrTALDWSWLQTE;
RRRRRRRTALDWSWLQTE; YARKARRQARRTALDWSWLQTE;
yarkarrqarrTALDWSWLQTE YARAARRAARRTALDWSWLQTE;
yaraarraarrTALDWSWLQTE YGRKKRRQRRRLDWSWL; ygrkkrrqrrrLDWSWL;
RRMKWKKLDWSWL; rrmkwkkLDWSWL; rrrrrrrLDWSWL;
YARAARRAARRLDWSWL; yaraarraarrLDWSWL; and RRRRRRRLDWSWL.

13. An anti-inflammatory compound having a structure selected from the group consisting of:

H-RRMKWKKTALDWSWLQTE-$NH_2$;
H-YGRKKRRQRRRTALDWSWLQTE-$NH_2$;
H-rrrrrrrTALDWSWLQTE-$NH_2$;
H-YARKARRQARRTALDWSWLQTE-$NH_2$;
H-YARAARRAARRTALDWSWLQTE-$NH_2$;
H-RRMKWKKLDWSWL-$NH_2$;
H-rrmkwkkLDWSWL-$NH_2$;
H-rrrrrrrLDWSWL-$NH_2$;
H-YARAARRAARRLDWSWL-$NH_2$;
H-yaraarraarrLDWSWL-$NH_2$; and
H-YGRKKRRQRRRLDWSWL- $NH_2$.